DEFENSE INFORMATION SYSTEMS AGENCY
JOINT INTEROPERABILITY TEST COMMAND
P.O. BOX 12798
FORT HUACHUCA, ARIZONA 85670-2798

IN REPLY
REFER TO: Battlespace Communications Portfolio (JTE) 12 December 2007

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Special Interoperability Test Certification of Cisco Unified MeetingPlace® with Software Release 5.4.1

References: (a) DoD Directive 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01D, "Interoperability and Supportability of Information Technology and National Security Systems," 8 March 2006

1. References (a) and (b) establish the Defense Information Systems Agency, Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification. Additional references are provided in enclosure 1.

2. The Cisco Unified MeetingPlace® with Software Release 5.4.1 is hereinafter referred to as the System Under Test (SUT). The SUT met all the critical interoperability requirements for a Customer Premise Equipment Meet Me Conference set forth in reference (c). The SUT is a conferencing solution that integrates voice, video, and web conferencing capabilities including optional collaboration tools, presentations, chat, whiteboard, and application sharing. Video and application sharing were not tested by JITC and are not approved for use within the DSN by the DSN Program Management Office (PMO). The SUT is certified with or without the optional collaboration tools, presentations, chat, and whiteboard abilities. The SUT is certified for joint use within the Defense Switched Network (DSN) specifically with any Cisco CallManager Private Branch Exchange 1 listed on DSN Approved Products List (APL). The SUT was tested on the Cisco Unified MeetingPlace® MP-8106 Audio Server. The MP-8112 employs the same software and hardware as the MP-8106. Analysis by JITC determined that the MP-8112 is functionally identical to the MP-8106 for interoperability certification purposes, and it is also certified for joint use within the DSN. The SUT is certified to support DSN Assured Services over Internet Protocol with any Assured Services Voice Application Local Area Network (ASVALAN) on the DSN Approved Products List (APL). The SUT is also certified for joint use with any Voice Application Local Area Network (VALAN) on the DSN APL. However, since VALANs do not support the Assured Services Requirements detailed in reference (c), Command and Control (C2) users and Special C2 users are not authorized to be served by the SUT connected to a VALAN. Testing was conducted using test procedures derived from reference (d). No other configurations, features, or functions, except those cited within this report, are certified by the JITC, or authorized by the Program Management Office for use within the DSN. This certification expires upon changes that affect interoperability, but no later than three years from the date of this memorandum.

3. This certification is based on interoperability testing of the SUT and review of the vendor's Letters of Compliance (LoC). Interoperability testing was conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, Arizona from 2 through 20 July 2007. Regression testing was conducted from 10 through 15 September 2007. Additional regression testing was conducted on 31 October 2007. Review of the vendor's LoC was completed on 2 November 2007. The Certification Testing Summary (enclosure 2) documents the test results and describes the test network.

4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are depicted in table 1.

Table 1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Functional Requirements	Status	GSCR Paragraph
IEEE 802.3u 100BaseT	Yes	Yes	Each Meet-Me Conference shall be capable of MLPP (R)	Met	2.6.6
			Each Meet-Me Conference shall be capable of establishing two separate bridges with each bridge having a capacity of 10 conferees each. (C)	Met	2.6.6
			All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the Administrative Council for Terminal Attachments (ACTA) (R)	Met	A7.5
			Ethernet interface in accordance with IEEE 802.3-2002 (R)	Met	A7.5
	Yes	See note.	Security (R)	See note.	A7.6

LEGEND:

100BaseT	- 100 Mbps (Baseband Operation, Twisted Pair) Ethernet	IEEE	- Institute of Electrical and Electronics Engineers, Inc.
802.3u	- Standard for carrier sense multiple access with collision detection at 100 Mbps	Mbps	- Megabits per second
A	- Appendix	MLPP	- Multi-Level Precedence and Preemption
DISA	- Defense Information Systems Agency	R	- Required
DISR	- Department of Defense Information Technology Standards Registry	SUT	- System Under Test
GSCR	- Generic Switching Center Requirements		

NOTE: Information assurance testing is accomplished via DISA-led Information Assurance test teams and published in a separate report.

5. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/.gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi.

6. The JITC point of contact is Edward Mellon, DSN 879-5159, commercial (520) 538-5159, FAX DSN 879-4347, or e-mail to Edward.Mellon@disa.mil. The tracking number for the SUT is 0708004.

FOR THE COMMANDER:

2 Enclosures a/s

MANUEL H. GARCIA, JR.
Acting Chief
Battlespace Communications Portfolio

Distribution:
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Office of Chief of Naval Operations (N71CC2), CNO N6/N7, 2000 Navy Pentagon, Washington, DC 20350
Headquarters U.S. Air Force, AF/XICF, 1800 Pentagon, Washington, DC 20330-1800
Department of the Army, Office of the Secretary of the Army, CIO/G6, ATTN: SAIS-IOQ, 107 Army Pentagon, Washington, DC 20310-0107
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Defense Intelligence Agency, 2000 MacDill Blvd., Bldg 6000, Bolling AFB, Washington, DC 20340-3342
National Security Agency, ATTN: DT, Suite 6496, 9800 Savage Road, Fort Meade, MD 20755-6496
Director, Defense Information Systems Agency, ATTN: GS235, Room 5W24-8A, P.O. Box 4502, Falls Church, VA 22204-4502
Office of Assistant Secretary of Defense (NII)/DoD CIO, Crystal Mall 3, 7th Floor, Suite 7000, 1851 S. Bell St., Arlington, VA 22202
Office of Under Secretary of Defense, AT&L, Room 3E144, 3070 Defense Pentagon, Washington, DC 20301
U.S. Joint Forces Command, J68, Net-Centric Integration, Communications, and Capabilities Division, 1562 Mitscher Ave., Norfolk, VA 23551-2488
Defense Information Systems Agency (DISA), ATTN: GS23 (Mr. McLaughlin), Room 5W23, 5275 Leesburg Pike (RTE 7), Falls Church, VA 22041

ADDITIONAL REFERENCES

(c) Defense Information Systems Agency, "Department of Defense Voice Networks Generic Switching Center Requirements (GSCR), Errata Change 2," 14 December 2006, Revised 27 March 2007

(d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006

CERTIFICATION TESTING SUMMARY

1. SYSTEM TITLE. Cisco Unified MeetingPlace® with Software Release 5.4.1; hereinafter referred to as the System Under Test (SUT).

2. PROPONENT. Defense Information Systems Agency (DISA).

3. PROGRAM MANAGERS. Mr. Timothy K. Raines, GS25, 5275 Leesburg Pike, Falls Church, Virginia 22041, E-mail: timothy.raines@disa.mil.

4. TESTER. Joint Interoperability Test Command (JITC), Fort Huachuca, Arizona.

5. SYSTEM UNDER TEST DESCRIPTION. The SUT is a conferencing solution that integrates voice, video, and web conferencing capabilities including optional collaboration tools, presentations, chat, whiteboard, and application sharing. Video and application sharing were not tested by JITC and are not approved for use within the Defense Switched Network (DSN) by the DSN Program Management Office (PMO). The SUT is certified with or without the optional collaboration tools, presentations, chat, and whiteboard abilities. The SUT conference server is a call- and voice-processing hardware platform that provides digital telephony access for DSN and Public Switched Telephone Network (PSTN) users and to Internet Protocol (IP) telephony infrastructures. The SUT resides outside the switch in a rack mounted cabinet configuration. The SUT is for use specifically with Cisco CallManagers listed on the DSN Approved Products List (APL) which are certified as Private Branch Exchange (PBX) 1s. The SUT is composed of the following hardware.

The Cisco Unified MeetingPlace® Audio Server MP-8106 integrates voice, video, web conferencing, and enterprise groupware application for secure on-network, media conferencing. JITC analysis determined the Cisco Audio Server MP-8112 has the same hardware and software as the MP-8106 and it is also covered under this certification. The Cisco Unified MeetingPlace® Audio Server MP-8106 has six expansion slots for interface cards:

The MP-SMARTBLADE card provides the network interfaces, the translation of packet audio from the IP network to Time Division Multiplex (TDM) audio, vocoding, interactive voice response capabilities, conferencing capabilities, and VTC capabilities.

The MP-MA-4 Blade card supports IP and TDM interfaces. Only the IP interface was tested. The TDM interface was not tested by JITC and is not authorized by the DSN Program Management Office for use within the DSN. The MP-MA-16 Blade card utilizes the same hardware and software ans the MP-MA-4 Blade card and was developed for scalability purposes. JITC analysis determined that the MP-MA-16 Blade card is functionally identical for interoperability certification purposes and it is also covered under this certification.

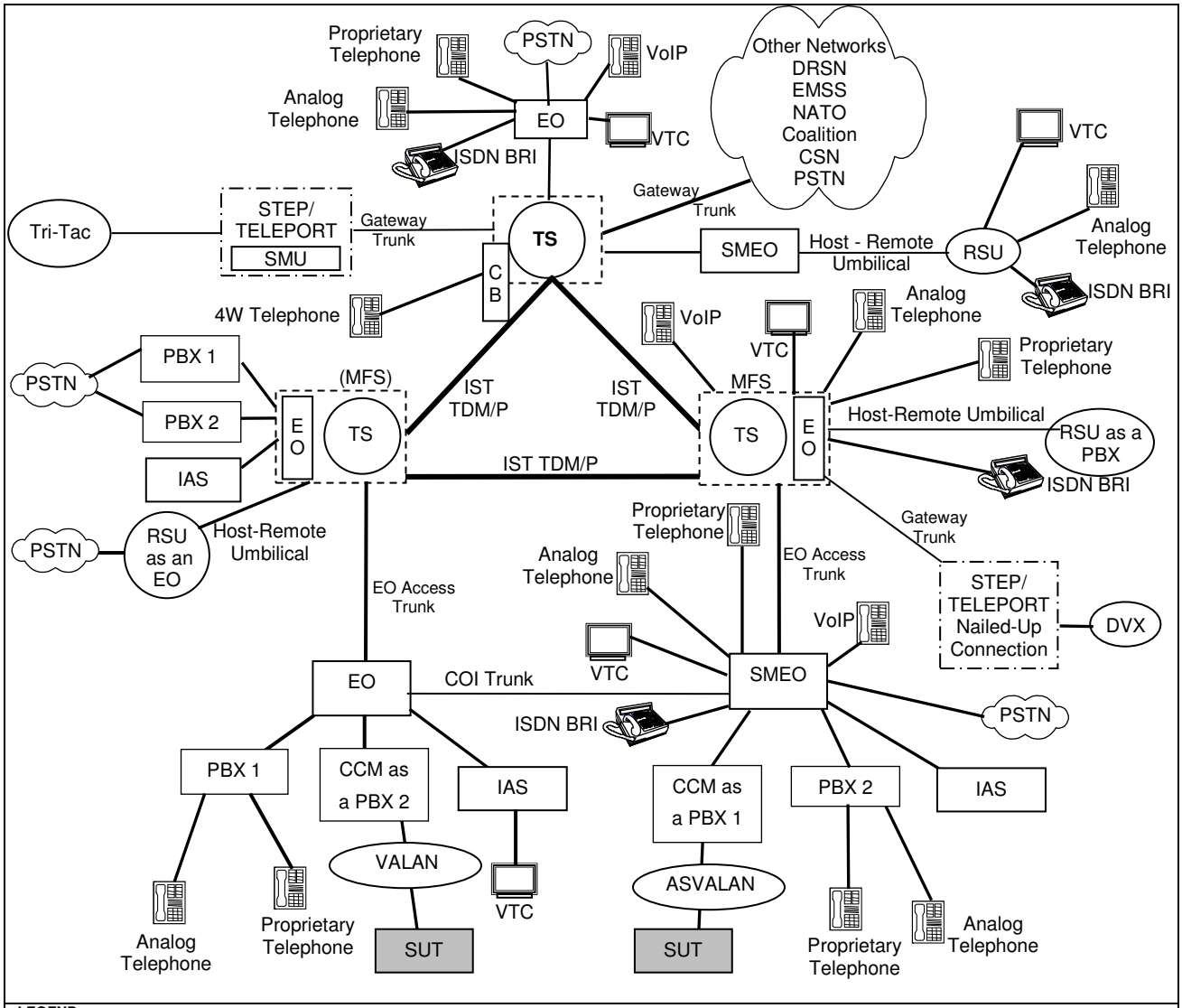
The Management Blade provides Central Processing Unit and configuration interface

for the Audio Server.

The Cisco Unified MeetingPlace® Web/IP Gateway server was installed on a Cisco Media Convergence Server (MCS)7835. JITC analysis determined the Cisco MCS7800 series has the same hardware and software as the MCS7835 and the MCS7800 series is also covered under this certification as the Cisco Unified MeetingPlace® platform. The Cisco MCS7800 series provides server platforms to host applications within the Cisco Unified Communications system.

The Cisco Unified MeetingPlace® is managed with a workstation running Windows 2000 Server operating system 5.00.2195 (Service Pack 4) and is used for management and administration of the Cisco Unified MeetingPlace® solution.

6. OPERATIONAL ARCHITECTURE. The Generic Switching Center Requirements (GSCR) DSN architecture in figure 2-1 depicts the relationship of the SUT to the DSN switches.



LEGEND:

4W	- 4-Wire
ASVALAN	- Assured Services Voice Application Local Area Network
BRI	- Basic Rate Interface
CB	- Channel Bank
CCM	- Cisco CallManager
COI	- Community of Interest
CSN	- Canadian Switch Network
DRSN	- Defense Red Switch Network
DSN	- Defense Switched Network
DVX	- Deployable Voice Exchange
EMSS	- Enhanced Mobile Satellite System
EO	- End Office
IAS	- Integrated Access Switch
ISDN	- Integrated Services Digital Network
IST	- Interswitch Trunk
MFS	- Multifunction Switch
NATO	- North Atlantic Treaty Organization
PBX	- Private Branch Exchange
PBX 1	- Private Branch Exchange 1
PBX 2	- Private Branch Exchange 2
PRI	- Primary Rate Interface
PSTN	- Public Switched Telephone Network
RSU	- Remote Switching Unit
SMEO	- Small End Office
SMU	- Switched Multiplex Unit
STEP	- Standardized Tactical Entry Point
SUT	- System Under Test
TDM/P	- Time Division Multiplex/Packetized
Tri-Tac	- Tri-Service Tactical Communications Program
TS	- Tandem Switch
VALAN	- Voice Application Local Area Network
VoIP	- Voice over Internet Protocol
VTC	- Video Teleconferencing

Figure 2-1. DSN Architecture

7. REQUIRED SYSTEM INTERFACES. Requirements specific to the SUT and interoperability results are listed in table 2-1. These requirements are derived from the GSCR Interface and Functional Requirements verified through JITC testing.

Table 2-1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Functional Requirements	Status	GSCR Paragraph
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			Ethernet interface in accordance with IEEE 802.3-2002 (R)	Met	A7.5
	Yes	See note.	Security (R)	See note.	A7.6

LEGEND:

100BaseT	- 100 Mbps (Baseband Operation, Twisted Pair) Ethernet	IEEE	- Institute of Electrical and Electronics Engineers, Inc.
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NOTE: Information assurance testing is accomplished via DISA-led Information Assurance test teams and published in a separate report.

8. TEST NETWORK DESCRIPTION. The SUT was tested at JITC's Global Information Grid Network Test Facility in a manner and configuration similar to that of the DSN operational environment. Testing the system's required functions and features was conducted using the test configuration depicted in figure 2-2.

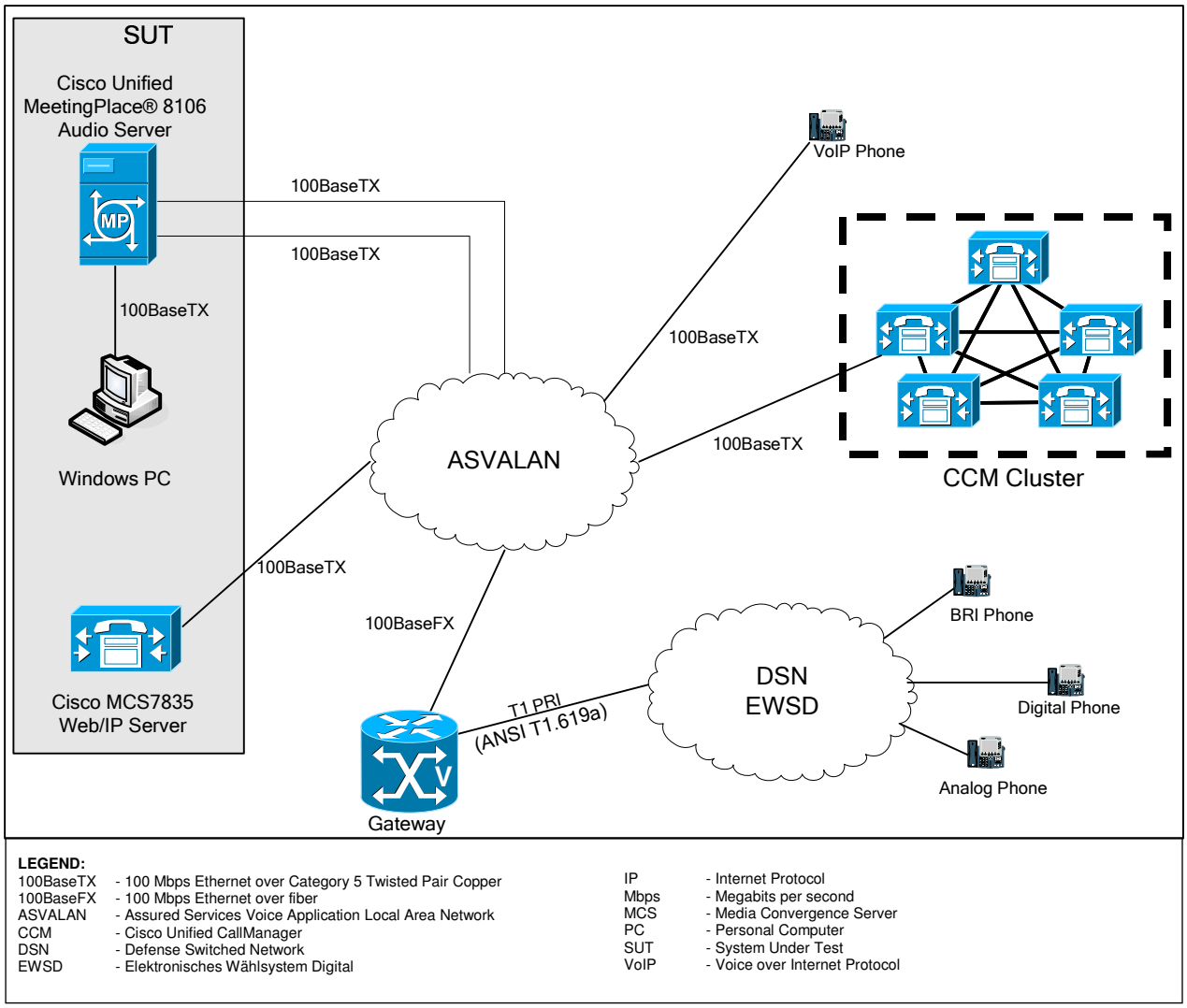

Figure 2-2. SUT Test Configuration

9. SYSTEM CONFIGURATIONS. Table 2-2 provides the system configurations, hardware and software components tested with the SUT. The SUT was tested in an operationally realistic environment to determine interoperability with the DSN switches noted in table 2-2. The DSN switches listed in table 2-2 only depict the tested configuration. Table 2-2 is not intended to identify the only switches that are certified with the SUT. The SUT is certified with all Cisco CallManager PBX 1 switching systems listed on the DSN Approved Products List (APL) that offer the same certified interfaces.

Table 2-2. Tested System Configuration

<table>
<tr><th>System Name</th><th colspan="3">Software Release</th></tr>
<tr><td>Siemens EWSD</td><td colspan="3">19d with Patch Set 46</td></tr>
<tr><td>Cisco CallManager</td><td colspan="3">4.2(3) SR3</td></tr>
<tr><td>Cisco CallManager</td><td colspan="3">4.3(1) SR1</td></tr>
<tr><td>RAE</td><td colspan="3">Windows Active Directory Server</td></tr>
<tr><td>Management Console</td><td colspan="3">Windows XP Workstation</td></tr>
<tr><td rowspan="13">SUT</td><td>Hardware</td><td colspan="2">Software</td></tr>
<tr><td rowspan="4">Cisco Unified MeetingPlace® Audio Server MP-8106</td><td colspan="2">LynxOS 5.4.1.4</td></tr>
<tr><td>Blade</td><td>Software</td></tr>
<tr><td>MP-SMARTBLADE</td><td>N/A</td></tr>
<tr><td>MP-MA-4 Blade</td><td>N/A</td></tr>
<tr><td>Management Blade</td><td>N/A</td></tr>
<tr><td>Hardware</td><td colspan="2">Application/Software Release</td></tr>
<tr><td rowspan="8">Cisco Web & IP Server MCS7835</td><td colspan="2">Operating System: Windows 2000, SP4</td></tr>
<tr><td colspan="2">IIS 5.0</td></tr>
<tr><td colspan="2">SQL Server 2000 SP4</td></tr>
<tr><td colspan="2">MP Web Conference 5.4.156.0</td></tr>
<tr><td colspan="2">MP IP Gateway 5.3.1.5</td></tr>
<tr><td colspan="2">MP Directory Services 5.4.104</td></tr>
<tr><td colspan="2">MP Backup 5.3.0.7</td></tr>
<tr><td colspan="2">MP Outlook 5.4.123</td></tr>
<tr><td colspan="2">MP Video Integration 5.4.107</td></tr>
</table>

LEGEND:

IIS - Internet Information Server
IP - Internet protocol
EWSD - Elektronisches Wählsystem Digital
MCS - Media Convergence Server
MP - Meeting Place
N/A - Not Applicable
OS - Operating System
RAE - Required Auxiliary Equipment
SP - Service Pack
SQL - Structured Query Language
SR - Software Release
SUT - System Under Test
XP - Experience

10. TEST LIMITATIONS. None.

11. TEST RESULTS

a. Discussion. To ensure that Multi-Level Precedence and Preemption (MLPP) interaction with the SUT is met, the licensed software must be purchased with more access ports than conference ports. This will allow for a higher precedence caller to preempt the lowest resource when the conference ports are fully active.

The GSCR requirement states that a switch shall meet the Meet-Me conference requirements with an internal or external conference bridge. The SUT, as an external bridge connected to the switch, met the following FRs for Meet-Me Conferencing as described in GSCR, paragraph 2.6.6:

- Each Meet-Me conference bridge shall be fully capable of MLPP access and control as described in paragraph 3.1.4.

- When a precedence call above ROUTINE is placed to a Meet-Me conference bridge that is activated with no remaining idle resources, the switch shall conduct a preemptive search to determine the lowest active resource on the bridge, and

that resource shall receive a Precedence Notification Tone (PNT) and be preempted. All remaining conferees on the bridge shall receive a conference disconnect tone.

b. Test Conduct. Inter-switch and intra-switch calls were placed to the SUT to test meet-me conference server interaction with MLPP. Intra-switch testing was conducted on the Cisco CallManager PBX1. Inter-switch testing was conducted between the Cisco CallManager PBX1 and the Siemens EWSD over an American National Standards Institute (ANSI) T1.619a Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) circuit. The full capacity of ports on the SUT and the ANSI T1.619a ISDN PRI circuit were active with intra-switch and inter-switch calls. The following tests were conducted to insure that the SUT properly interacted with MLPP as required in the GSCR.

(1) Intra-switch and inter-switch calls were placed to the SUT at all precedence levels.

(2) Higher precedence intra-switch and inter-switch calls placed to the SUT preempted the lowest active conferee which received the proper PNT. The remaining conferees received a proper conference disconnect tone.

(3) ROUTINE intra-switch and inter-switch calls placed to the SUT received a proper busy tone.

(4) Equal or lower precedence intra-switch and inter-switch calls above ROUTINE were placed to the SUT and the caller received the proper Blocked Precedence Announcement.

c. Test Summary. The SUT met the critical interoperability requirements for a Customer Premise Equipment Meet Me Conference and is certified for joint use within the DSN specifically with the Cisco CallManager PBX 1 switches posted on the DSN APL. The SUT is certified with or without the optional collaboration tools, presentations, chat, and whiteboard abilities.

12. TEST AND ANALYSIS REPORT. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi.